1. **Basic information**
2. **Harveston Asset Management**

A quantitative fund that trades extensively in FX, Fixed Income and Derivative products, across India, China and Hong Kong.

The high frequency trading model uses sophisticated algorithms coupled with low latency networks to run a portfolio of absolute return strategies.

The short-term strategies focus on equity markets and uses Machine Learning and statistics on portfolio optimization and execution.

1. **Job Requirements – Junior Trader**

* Constantly monitor market conditions and events, execute orders (Equities, FX, Futures) if necessary, implementing trading strategies in Asian, London and US markets.
* Regularly check trading positions against algorithmic models.
* Come up with any trading strategies and ideas from time to time.
* Work with Quant analyst and suggest improvement.

1. **Interview questions**
2. ***Tell me more about yourself***

My bachelor degree was from NUS, where I majored in Accountancy. That was between 2009 and 2013.

Between 2013 and 2016, I was a manager with the Central Provident Fund (CPF) Board, where I was involved in:

* Analysing raw data to (1) ensure that they are accurate for government scheme payouts and (2) identify prevalent trends and provide relevant recommendations to support government policy reviews
* Working directly with my IT colleagues on various new implementations (i.e. develop new systems) and system enhancements/automations (i.e. on existing user interfaces), where I have to come up with the project requirements, test plan and scenarios, and thereafter test the new/enhanced system to ensure everything checks out according to the requirements.

Thereafter in 2016, I went on to pursue my joint Master studies in Quantitative Finance with SMU and City University, which is based in London.

After my graduation from my Masters studies in Aug 2017, I began my new career with Mizuho Bank, where I was involved in working with various stakeholders to develop robust financial tools using programming languages and conduct research on latest Fintech developments and solutions.

1. ***Workfare details***

Just a brief introduction on Workfare, which was the government scheme that I was working on. Workfare is a government scheme that encourages eligible lower wage workers to stay employed by supplementing their monthly incomes and retirement savings with monthly payouts. It also encourages them to up-skill by providing separate funding support for their training purposes.

Before 2017, one of the qualifying criteria is that the worker must be earning a gross monthly income of not more than $1,900.

During the Workfare policy review for 2017’s implementation, one of the goals was to ensure that Workfare will continue to be targeted at the bottom 30th income percentile of workers. From the income data residing in our database, we were able to identify that the nominal gross income of the bottom 30th percentile has increased from $1,900 in 2012 to $2,000 in 2015. Thus, we proposed to our Minister to peg the new income ceiling to $2,000 instead for 2017’s implementation.

1. ***Why do you want to pursue a junior trader job?***

Personally, I am someone who enjoys working in an environment where it allows me to learn, operate independently and make decisions that I can take responsibility for. Trading presents itself as an ideal environment where the market’s unpredictability means that there are always new challenges to overcome. Learning how to make time-sensitive decisions to cope with these challenges and taking ownership of the decisions made really appeal to me. Even if I make a mistake in the decision-making process, I would accept it, learn from it and avoid making the same mistake twice. Thus, if given the opportunity, I really wish to build a career in this area.

1. **Can you give an example of your passion in trading? What is your experience in trading?**

Personally, I do not have much experience in market trading.

Prior to my stint with Mizuho Bank, I held some stocks for passive trading [If asked: Biomedical/Agricultural technology sector: Trendlines, Manufacturing: Innovalues (delisted and taken over by private equity firm, Telcos: Singtel and Starhub)].

During my time with SMU, I was also involved in several trading-related coursework. One of them was the technical analysis of quantitative trading strategies, where I was involved in back-testing 2 trading strategies:

* DeMark’s 9-day moving average strategy (mean reversion strategy: Buy if Pt < Pt-4 for 9 consecutive times and Sell if Pt > Pt-4 for 9 consecutive times
* Multi-asset dollar-neutral factor strategy (mainly value and momentum factors)

These trading strategies were back-tested against portfolios of 20 largest US technology stocks and 20 largest healthcare stocks using MATLAB and Python. Thereafter, we evaluated each strategy’s performance by measuring average P&Ls, volatilities and trading Sharpe ratios:

* DeMark’s 9-day moving average strategy works well for stocks with low volatility
* Multi-asset dollar-neutral factor strategy works well for stocks with lower frequency price and slower rebalancing periods (e.g. monthly)

1. **How can you contribute to the company?**

I would like to apply my financial knowledge and practical skillsets that I have acquired through my studies and past work experiences to design, implement and execute trading strategies. With the abundance of financial data in this time and age, it opens doors to how we can use these data effectively to derive useful market insights, which can be used to improve existing trading strategies and formulate new ones based on our hypothesis about market behaviour.

1. ***Why do you want to leave your current job?***

My current job focuses more on the IT programming aspects, where I use programming languages and automation software to design financial tools to meet users’ requirements. While my job may appeal to some, I am the kind of person who would derive more job satisfaction when I can further my interest in financial markets trading and deepen my independent problem-solving and analysis skillsets.

1. ***Why do you want to leave your previous job at CPF Board? Why the sudden decision to further your studies? And why Quantitative Finance?***

I believe in the process of lifelong learning. Since knowledge and technology are changing with time, I feel that it is important to keep up with current environment and upgrade myself by acquiring the relevant skillsets, such as programming, which I may not use to have. This was why I have chosen a Master in Quantitative Finance. This is because the program offers a unique teaching and hands-on learning curriculum that allows me to acquire generic programming skills that is applicable to all industries.

1. ***Describe one major time-critical project that you took part in and describe how you handled it?***

One of the major time-critical projects that I handled was during my current stint with Mizuho Bank, where I had to invent a new tool to automate the matching and booking of Non-Deliverable Forward (NDF) trades between front-end and back-end systems within the short time span of 2 weeks.

It was an intensive process because I had to work with inherent system constraints/differences and think of innovative ways to match and book the NDF trades accurately and automatically in both front and back office systems, without changing the existing front and back office system designs. In the end, I resolved all these issues with the use of Excel VBA and Robotic Process Automation (which was a new and untested technology for the Bank). As a result of this automation tool, a total of 2 man-hours was saved on a daily basis for both front and back offices.

Note:

NDFs are short-term forward contracts that are cash-settled. The notional amounts are never exchanged, hence the name “non-deliverable”. Two parties agree to take opposite sides of a transaction for a set amount of money (in the case of a currency NDF) at a contracted rate. The profit or loss is calculated on the notional amount of the agreement by taking the difference between the agreed upon rate and the [spot rate](https://www.investopedia.com/terms/s/spot_rate.asp) at the time of settlement.

NDFs are most frequently quoted and settled in USD. They are used by corporations to [hedge](https://www.investopedia.com/terms/h/hedge.asp) exposure to foreign currencies that are not internationally traded or whose trade is limited or legally restricted in the domestic market. If a country's currency is restricted from moving offshore, it would not be possible to settle the transaction in that currency with someone outside the restricted country. But, the two parties can settle the NDF by converting all profits and losses on the contract to a freely traded currency (e.g. USD). They can then pay each other the profits/losses in that freely traded currency.

1. ***What is the riskiest thing that you have done?***

The riskiest thing I have done was revising for my GMAT test 3 days prior to the test date. That was in 2016. Back then, I was busy rolling out a major time-critical project for CPF Board. There was hardly enough time for revision as I had to work occasionally on weekends. When I finally had the time for revision, I spent half a day designing a study plan and setting daily goals. The daily goals involved familiarizing myself with tonnes of vocabulary that I had not seen in my life and reviewing the sample GMAT papers. This was necessary for me as it had been 3 years since I left formal education and I did not receive any formal GMAT training prior to the test.

During those 3 days, I stuck closely to my study plan and ensured that the daily goals were met at the end of each day. While this was a risky move, I believed that my self-discipline and ability to cope with high pressure time-critical situations would see me through this difficult time. Because of these characteristics, I managed to pass the GMAT test.

1. ***What has been your biggest mistake?***

During my stint with CPF Board, part of my job involved dealing with large amounts of data to ensure that they are accurate for government payouts. In that incident, I overlooked on some data anomalies and this resulted in erroneous payments made to the public. When I realized what I had done wrong, I immediately took responsibility and devised a recovery action plan to inform the affected individuals about the erroneous payments. As the affected number was less than 10, I called up each of them to apologize, and explained to them how the erroneous payments came about.

Through this incident, I learnt to be more sensitive when handling data (e.g. how data anomalies could have a downstream impact and how to deal with them). I only had to make this mistake once to learn from it, though it was a tough way to learn.

1. ***Do you have any questions for us?***

* What is the career progression like?
* What are the performance expectations of this position over the first 6 months?